

REMARKS

Specification

The Examiner has objected to the layout of the specification. By this amendment, section headings have been provided in compliance with 37 C.F.R. 1.77(b).

Pending Claims

Claims 1 - 2, 4 - 6, and 8 - 10 are pending in the application, claims 3 and 7 having been canceled without prejudice, and claim 10 having been added.

Claims 1 and 4 have been objected to because of apparent misspellings and omissions which have been corrected herein. Additional amendments have been made to the claims to better conform to U.S. practice. No new matter has been added by way of these amendments.

Claims 1, 2 and 7 - 9 have been rejected under 35 U.S.C. §102(b) as being anticipated by German published patent specification No. 1504883 (Footner). Claims 3 - 6 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Footner in view of Iwasa (United States Patent No. 5,143,772). Claims 1 - 9 have been further rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasa ('772) in view of itself or Footner.

Claim rejections under 35 U.S.C. §102(b)

Under this heading, claims 1, 2 and 7 - 9 have been rejected as being anticipated by Footner.

By this amendment, claim 1 has been amended to make clear that

- (a) the strip comprises a seal which is extruded from flexible thermoplastic elastomer material having an outside surface of open-cell foamed form;
- (b) a first thin covering is extruded over the tubular seal and is of closed-cell form to close off the open cells of the seal, and it has an outwardly facing surface the coefficient of friction of which is not less than a predetermined value;

(c) a second separate thin covering is extruded onto the outside of the first covering, the second covering presenting an outwardly facing surface having a coefficient of friction which is lower than the predetermined value.

The applicant respectfully submits that, in Footner, there is no disclosure that the seal (the part 35) is made from thermoplastic elastomer material. In fact, it is said to be molded from "natural foam or sponge rubber which has a good plastic 'memory characteristic.'" Therefore, there is a fundamental difference between the disclosure in Footner and what is claimed in amended claim 1.

Secondly, in the invention the first thin covering is produced by extruding it onto the seal of thermoplastic elastomer material. In Footner, the product described has an outer layer on the foamed material but this layer is not extruded onto the foamed material. Footner describes a prior art method in which the foamed material can be dipped into "synthetic coating material" to form a skin, and a second method in which the thin layer (which forms the outer covering) is produced first and then "folded round" the foamed material which is initially uncured and heated to expand it. This is clearly different than the invention of claim 1 where, as stated, the first covering is extruded onto the foamed material.

Finally, claim 1 has been amended to make clear that the second covering of the invention is separate from the first covering and, again, is an extruded covering on the first covering - and presents an outermost surface having a lower coefficient of friction.

In the Office Action, the Examiner refers to Figure 1 of Footner and refers to "a second covering (the outermost outside portion of the strip) having a coefficient of friction lower than the first covering." However, Figure 1 appears to show only a single "covering" - the thin "layer." (There is a reference in Footner to the possible provision of a second coating, but this is not an extruded coating. The second coating is produced by a flow of the coating material and then heating in a curing oven.)

In view of the foregoing, it is respectfully submitted that claim 1 as amended is clearly distinguished over Footner.

Claim 2 is dependent on claim 1 and specifies that the second covering is made of plastics or rubber material. As shown above, claim 1 is distinguished over Footner and it therefore follows that claim 2 is likewise distinguished.

Claim 7 has been cancelled without prejudice. The rejection of this claim under this heading is therefore moot.

Claim 8 is dependent (indirectly) on claim 1 and therefore includes all its limitations. Claim 8 in fact includes the limitation of a "mounting part" which is co-extruded with the seal. For this reason, claim 8 is further distinguished over Footner.

Claim 9 is an independent "method" claim. It has been amended to emphasise the use of the extrusion steps and otherwise to incorporate the features (a), (b) and (c) above. It is clear from the remarks made above concerning the methods of production disclosed in Footner that the method steps of amended claim 9 are basically different. Thus, claim 9 specifies extrusion steps, whereas Footner uses "dipping" or "wrapping" or "flowing" steps. Therefore, it is believed that claim 9 is clearly distinguished over Footner.

Claim rejections under 35 U.S.C. §103

Claims 3 - 6 have been rejected under 35 U.S.C. §103 (a) as being unpatentable over Footner in view of Iwasa '772. Claim 3 has been cancelled without prejudice, consequent on the incorporation of its limitations into claim 1. Therefore, the Examiner's rejection of claim 3 as being unpatentable over Footner in view of Iwasa '772 will be discussed in relation to claim 1.

The Examiner argues that Iwasa '772 shows a hollow seal and a mounting part and that it would be obvious to one of ordinary skill in the art to provide the seal of Footner with a hollow portion and a mounting portion as taught by Iwasa. This suggestion is respectfully traversed. It is not apparent why a skilled person would want to modify the strip of Footner so as to be hollow or to be mountable in the manner of Iwasa '770. More importantly, though, any such combination would still be clearly different from amended claim 1 - because of the significant differences discussed above between amended claim 1 on the one hand, and Footner on the other hand. Iwasa '772 discloses nothing of relevance to those differences.

In view of the foregoing, it is respectfully submitted that the subject-matter of claim 1 as amended is neither disclosed nor taught by any combination of Footner and Iwasa '772.

Claims 4, 5 and 6 are dependent, directly or indirectly on amended claim 1 and are, therefore, likewise believed to be clearly distinguished over any disclosure or teaching of Footner in view of Iwasa '772.

The Examiner then rejects claims 1 - 9 under 35 U.S.C. §103 (a) as being unpatentable over Iwasa '772 in view of itself or Footner.

The Examiner says that Iwasa discloses "two layers attached to a portion of the sealing strip." However, the two layers shown in Iwasa '772 cannot be equated with the two coverings of amended claim 1. In fact, in Iwasa '772, the inner or first layer is a layer of adhesive and the second or outer layer is a "finishing coating layer," such as a decorative layer. There is no suggestion whatsoever that the first layer is of closed-cell form so as to close off the open cells of the seal. There is no reference to coefficients of friction. The two layers in Iwasa '772 are used for completely different purposes (basically, to secure a decorative layer in position). Therefore, a person skilled in the art would have no reason whatsoever to combine any teaching that might be apparent from Footner into the disclosure of Iwasa '772. For these reasons, and the amendments made to the claims (claims 1 and 9 in particular), it is believed to be clear that claims 1 and 9 are fundamentally distinguished from Iwasa '772 in view of itself or in view of Footner, and that claims 2, 4 - 6 and 8, dependent on amended claim 1, are likewise distinguished.


As stated above, and as stated in the amended claims discussed above, the outer surface of the second covering in the strip according to the invention has a lower coefficient of friction than the outer surface of the first covering. This feature is particularly important when the strip of the invention is used to perform a sealing function between a door frame and a hinged door thereof because the door, in hingedly closing onto the sealing strip, will perform a sliding motion over the contacted surface (in addition, of course, to the compressing motion). This is explained in more detail at the top of page 5 of the specification of the application. In the case where the first covering (for closing off the open cells of the tubular sealing part) presents a relatively high coefficient of friction, significant problems can occur; more particularly, the closing door may tend to grab the surface of this covering. The

invention avoids this problem by the addition of the second, lower friction, covering. In order to emphasize this important aspect, new independent claim 10 has been added hereby to not only include the limitations of claim 1, but also to claim the strip in combination with the door opening frame and the door. It is therefore believed to be clear that claim 10 is patentable over the cited art.

Conclusion

In view of the foregoing remarks and amendments, claims 1, 2, 4 - 6, 8, 9 and 10 believed to be allowable over the cited art. Therefore, the application is considered to be in good and proper format for allowance, and the Examiner is respectfully requested to pass the application to issue. If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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